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I, JULIE BILLINGSLEY, TEAM LEADER EXAMINATION SUPPORT AND SALES hereby certify that annexed is a true copy of the Provisional specification in connection with Application No. PR 2691 for a patent by ARTHUR JAMES FAHY filed on 25 January 2001.

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This invention relates to electric generators.

Electric generators do not generate more power than the power that is provided to drive them.

It is the object of the present invention to ameliorate the above condition.

According to the present invention a generator comprises a stator, a support member and a switching means, at least one magnet attached to the stator and at least one coil wound around an armature of magnetic material attached to the stator and positioned adjacent to the said magnet, the said support member having at least one pole bridge of magnetic material located by the said support member such that when a prime mover provides relative movement between the support member and the stator the pole bridge is able to move toward and then in between the said armature and the said magnet and then out from between the said armature and the said magnet such that the pole bridge momentarily short circuits the magnetic flux of the magnet causing magnetic flux in the armature to reduce and the said switching means is operable to substantially open circuit the said coil before the pole bridge moves out from between the said armature and the magnet such that when a prime mover drives the support member or the stator at a speed an electric current is generated in the said coils and more power is generated by the generator than is provided to it by the said prime mover.

In one form of the invention the stator is made of aluminium, the support member is made of glass reinforced plastic, the coil is made of insulated copper wire, the magnetic material that the coil armature and the pole bridge are made of is a compressed iron material such as Somaloy™ made by Hoganas and the magnet is a rare earth magnet of neodymium iron boron. The switching means comprises two carbon brushes in intermittent contact with copper strips mounted on the support member and an electric motor is the prime mover.

In another form of the invention the switching means could be an electronic device with a magnetic pick up located on the support member to trigger the time of opening the coil circuit as the pole bridge starts to move out from a central position between the armature and the magnet. An electro magnet could be used as the magnet.

The invention will now be described with the aid of the following drawings, where dedicated numbering of particular parts of a generator according to the invention is consistent throughout all the drawings, where:

Fig. 1 is a schematic view of a generator according to the invention.

Fig. 2 is a schematic end cross section as viewed through section A-A in Fig. 3 and is a schematic representation showing the flux of the magnet in the coil armature with no pole bridge between the magnet and the armature.

Fig. 3 is a schematic representation showing the flux of the magnet in the armature with no pole bridge present between the magnet and the armature.

Fig. 4 is a schematic end cross section as viewed through section A-A in Fig. 5 and is a schematic representation showing the flux of the magnet in the coil armature and a pole bridge with the pole bridge moving toward and in between the magnet and the armature.

Fig. 5 is a schematic representation showing the flux of the magnet in the armature, and a pole bridge with the pole bridge moving toward and in between the magnet and the armature.

Fig. 6 is a schematic end cross section as viewed through section A-A in Fig. 7 and is a schematic representation showing the flux of the magnet in a pole bridge with the pole bridge moving but centrally located between the magnet and the armature.

Fig. 7 is a schematic representation showing the flux of the magnet in a pole bridge with the pole bridge moving but centrally located between the magnet and the armature.

Fig. 8 is a schematic end cross section as viewed through section A-A in Fig. 9 and is a schematic representation showing the flux of the magnet in the coil armature and a pole bridge with the pole bridge moving out and away from between the magnet and the armature.

Fig. 9 is a schematic representation showing the flux of the magnet in the armature and a pole bridge with the pole bridge moving out and away from between the magnet and the armature.

In Fig. 1 The generator 1 comprises a stator 2, a support member 3 comprising a rotatable disc and a switching means 4 comprising two carbon brushes 4a slidably contactable with copper strips 5, the said strips 5 are attached to the support member 3 and the carbon brushes 4a are attached to the stator 2, in this case a permanent magnet 6, shown in dotted outline because it is on the back side of support member 3 and otherwise not visible, is attached to the stator 2 on one side of the support member 3 and a coil 7 wound around an armature 8, attached to the stator 2, is adjacent to the magnet 6 but on the other side of the support member 3. Two pole bridges 9 are set into the support member 3. The support member 3 is fixed to a shaft 10 which is rotatable in bearings 11 in the stator 2. Support shaft 10 is rotatably driven by a prime mover 12 which comprises an electric motor 12. The prime mover 12 or motor 12 is supplied with power from an external source such as supply mains (not shown) through leads "A". Power generated by the coil 7 is available at terminals "B". An electrical load across terminals "B" is represented by a resistor C. Conducting leads 13 connect the coil 7 and the brushes 4a of the switching means 4 to terminals "B".

When the pole bridges 9 are not in between the magnet 6 and the coil armature 8 the flux from the magnet 6 goes through the support member 3 and into the coil armature 8. When power is supplied to the motor 12 via terminals "A" the motor 12 drives the shaft 10 and causes the shaft to rotate. The support member 3 is fixed to the shaft 10 and as the support member 3 also rotates it moves the pole bridges 9 firstly towards and then in between the armature 8 and the magnet 6 and then out from between the armature 8 and the magnet 6 so that the pole bridges 9 momentarily short circuit the magnetic flux of the magnet 6 away from the coil armature 8 so collapsing the flux from the coil armature 8 causing the magnetic flux of the magnet 6 to cut the conductors of coil 7 and produce an electric current in the coil 7 which is the output of the generator 1. The switching means 4 carbon brushes 4a rub on the copper strips 5 so that when both of the brushes are in contact with one of the copper strips the coil circuit which comprises the loop through the coil 7, the leads 13 and the load resistor "B" is complete. When shaft 10 is rotated the copper strips 5 of the switching means 4 are arranged to make and break the coil 7 circuit as the brushes 4a intermittently rub on the strips 5.

The switching means 4 is arranged to keep the coil 7 circuit closed when a pole bridge 9 is approaching the armature 8 and the magnet 6 and closed up to the point when a pole bridge 9 is centrally located or approximately centrally located between the armature 8 and the magnet 6. The switching means 4 is also arranged to open the coil 7 circuit as a pole bridge 9 moves out and away from a central position between the armature 8 and the magnet 6. If the coil 7 is not open circuited as the pole bridge 9 moves out and away from a central position between the armature 8 and the magnet 6 then like magnetic poles would be generated by the coil 7 in the armature 8 relative to the adjacent facing poles of the magnet 6 which would cause a much higher mechanical load on the prime mover 12 such that a generator configured so would operate like an ordinary generator where the output is less than the input.

When the prime mover 12 is driving the support member 3 around and a pole bridge 9 approaches the magnet 6 the pole bridge 9 is pulled in by the magnet 6 into a position centrally located between the armature 8 and the magnet 6, at the same time an electric current is generated in the coil 6 and therefore two positive work units are done, one mechanical and one electrical. When a pole bridge 9 is moving out from between the armature 8 and the magnet 6 and the coils 7 are open circuited by the switching means 4 the pole bridge 9 is held back by the magnet 6 and one negative unit of mechanical work is done. Therefore for each cycle there is one unit of electrical power outstanding.

When the prime mover 12 drives the support member 3 at a speed an electric current is generated in the coil 7 circuit and more power is generated by the generator 1 than is provided by the prime mover 12. It can be appreciated that if resistor C is dispensed with and terminals "A" are connected to terminals "B" , after the generator 1 has been driven up to speed, and the output from the generator 1 supplies the electric motor 12, then when the external power supply to the motor 12 is disconnected, the above configuration would be a powerful perpetual motion machine.

In Fig. 2 the magnet 6 is shown at its north pole N and the coil armature 8 is shown adjacent to the magnet 6. There is no pole bridge 9 between the magnet 6 and the armature 8. The magnetic flux X of the of the magnet 6 exist in the air gap "O" and in the armature 8. Most of the flux "X" from the magnet 6 bridges the gap between the magnet 6 and the armature 8.

In Fig. 3 the magnet 6 is shown with a north pole N and a south pole S and is adjacent the coil armature 8. There is no pole bridge 9 between the magnet 6 and the armature 8. A coil 7 is shown wrapped around armature 8 and has a resistive load C completing the coil circuit. The flux X is stationary so there is no magnetic flux X cutting the coil 7 windings and consequently no electric current being generated in the coil.

In Fig. 4 the magnet 6 is shown at its north pole N end and is adjacent to the coil armature 8. A pole bridge 9 is moving toward, in the direction of arrow P, and into between the magnet 6 and the armature 8. The flux X from the magnet 6 is in the pole bridge 9 and the armature 8 and is pulling the pole bridge 9 towards a central position between the magnet 6 and the armature 8. The pole bridge 9 is short circuiting the flux X away from the coil armature 8. The flux X is now cutting the coil 7 windings (not shown) around the armature 8 and consequently an electric current is being generated in the coil 7. The current now flowing in the coil 7 produces a south pole S in the armature as shown.

In Fig. 5 the magnet 6 is shown with a north pole N and a south pole S and is adjacent the coil armature 8. A coil 7 is shown wrapped around armature 8 and has a resistive load C completing the coil circuit. The flux X is shown moving from the armature 8 to the pole bridge 9, as denoted by arrows Q, as the pole bridge 9 is moving in, the direction of arrow P, toward a central position between the armature 8 and the magnet 6. The pole bridge 9 is short circuiting the flux X away from the coil armature 8. The flux X is cutting the coil 7 windings and consequently an electric current is being generated in the coil 7. This current now flowing in the coil 7 produces a south pole S and a north pole N in the coil armature 8 as shown. At a critical rotational speed of the prime mover 12 (not shown) ,in this phase of power generation by the coils 7. little or no power is required from the prime mover 12, except for windage, frictional, copper and iron losses, as rotational mechanical power is supplied by the pole bridge 9 being pulled by the magnetic flux X from the magnet 6 and the armature 8.

In Fig. 6 the magnet 6 is shown at its north pole N end and is adjacent to the coil armature 8. A pole bridge 9 is moving, in the direction of arrow P, and is in a central position between the magnet 6 and the armature 8. The flux X from the magnet 6 is now short circuited from the armature 8 by the pole bridge 9 and no flux X is in the coil armature 8.

In Fig. 7 the magnet 6 is shown with a north pole N and a south pole S and is adjacent to the coil armature 8. A pole bridge 9 is moving and is now is in a central position between the magnet 6 and the armature 8. The flux X from the magnet 6 is now completely short circuited from the armature 8 by the pole bridge 9 and no flux X is in the coil armature 8 or cutting the coil winding 7 and consequently no current is being generated in the coil 7.

In Fig. 8 the magnet 6 is shown at its north pole N end and is adjacent to the coil armature 8. A pole bridge 9 is moving, in the direction of arrow P, out and away from between the magnet 6 and the armature 8. The flux X from the magnet 6 is leaving the pole bridge 9 and moving into the armature 8. When the pole bridge 9 starts to move from a central position between the armature 8 and the magnet 6 the switching means, not shown, open circuits the coil, not shown, and consequently no electric current is generated in the coil 7.

In Fig. 9 the magnet 6 is shown with a north pole N pole and a south pole S and is adjacent to the coil armature 8. A pole bridge 9 is moving, in the direction of arrow P, out and away from between the magnet 6 and the armature 8. The flux X from the magnet 6 is leaving the pole bridge 9, as denoted by arrows Q, and moving into the armature 8. When the pole bridge 9 starts to move from a central position between the armature 8 and the magnet 6 the switching means, not shown, open circuits the coil 7, shown open circuited, and consequently no electric current is generated in the coil 7 by the flux X moving from the pole bridge 9 to the armature 8 cutting the coil 7 windings. If the coil 7 is not open circuited as the pole bridge 9 moves out and away from between the magnet 6 and the armature 8 then a north pole N is produced by the current of coil 7 in the armature 8 opposite the north pole N of the magnet 6 and a south pole S is produced in the armature 8 opposite the south pole S of the magnet 6 and this interaction causes a much higher mechanical load on the prime mover 12, not shown, to pull or drive the pole bridge 9 out from between the magnet 6 and the armature 8.

By using a generator made according to the invention one is able to generate an abundant supply of electricity without causing any pollution or using fossil fuel or nuclear energy. A powerful perpetual motion machine may also be constructed as previously described.

A person skilled in the art could construct a machine described above in different configurations, such as not completely opening the coil circuit but leaving a high resistance in the coil circuit, such as a resistor, but the essence of the invention, of creating an imbalance in an electromagnetic/magnetic circuit cycle is the spirit of the invention and any variation does not depart from the teaching of the art of this invention.

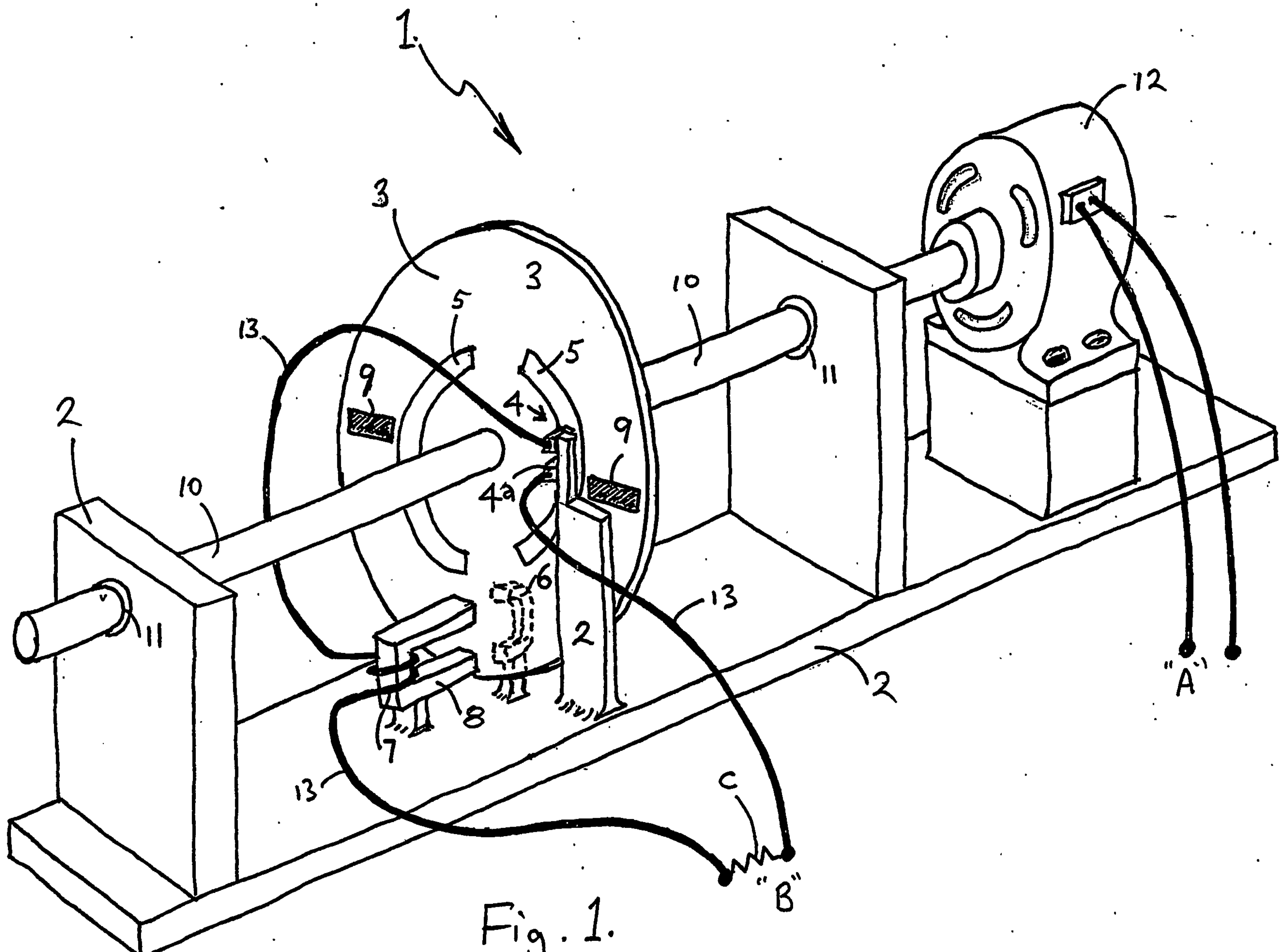

Fig. 1.

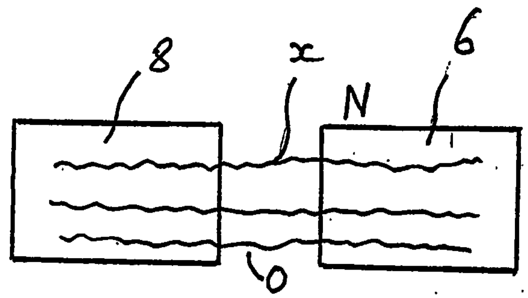

Fig 2.

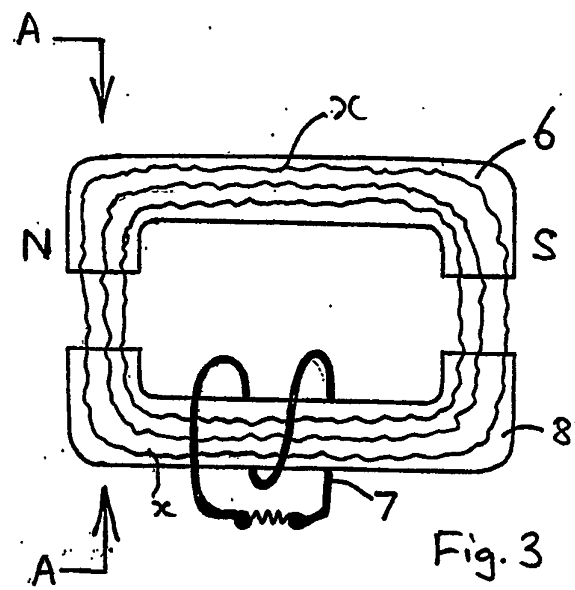

Fig. 3

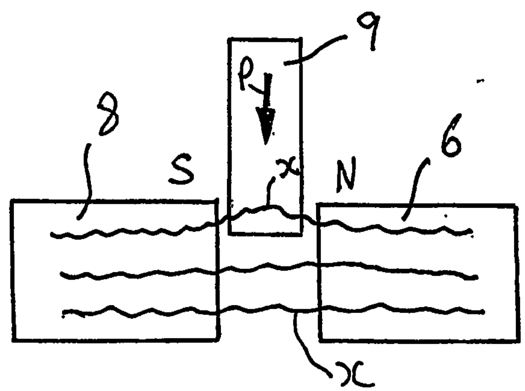

Fig. 4

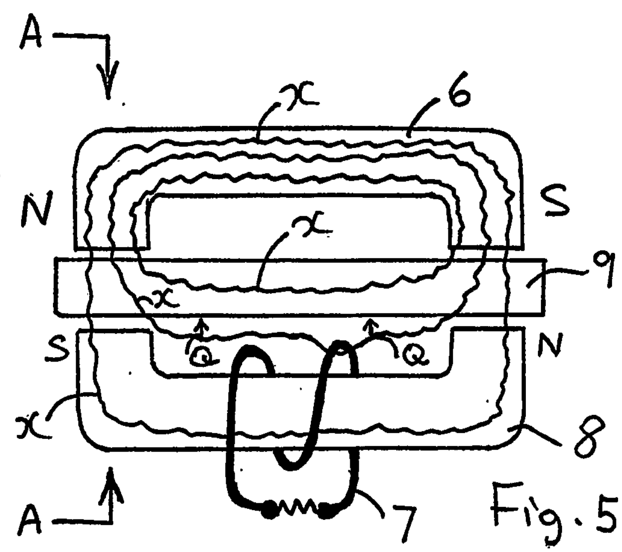

Fig. 5

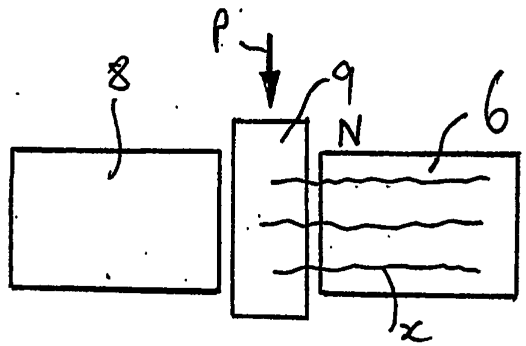

Fig. 6

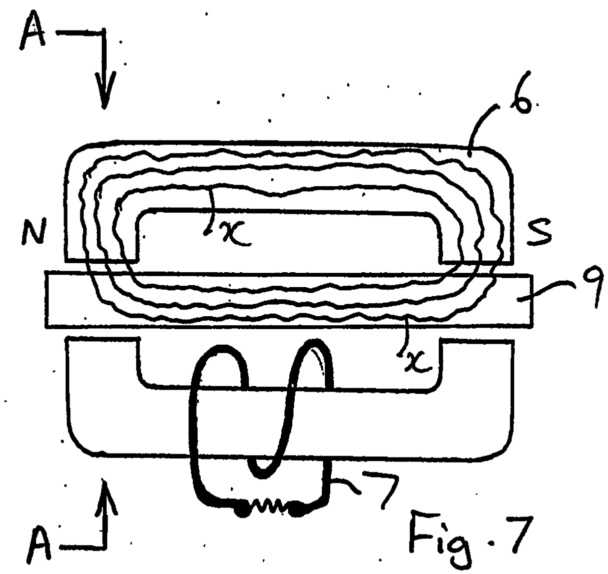

Fig. 7

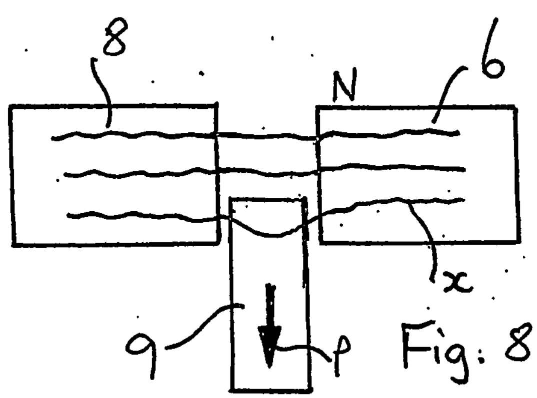

Fig. 8

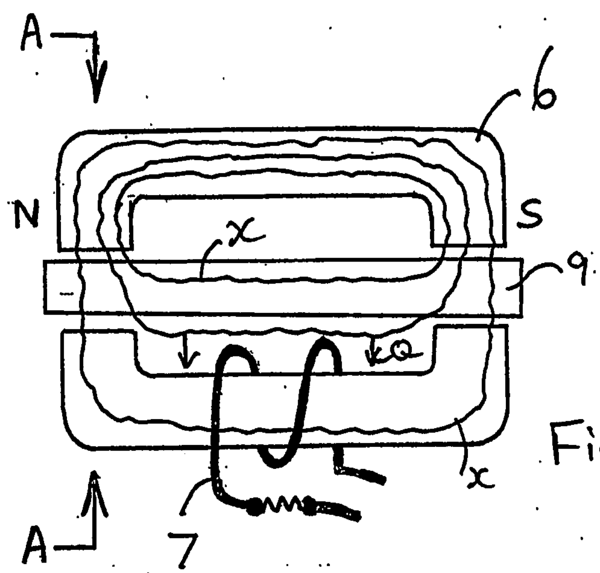

Fig. 9